

floe that covers the Arctic Ocean from America to Siberia appears to circulate about the pole with the winds and currents, moving eastward and northward on the Siberian side but eastward and southward on the American side.

### OREGON WEATHER AND BERING SEA ICE.

In the March report of the Oregon section Mr. E. A. Beals, Section Director, quotes from a recent pamphlet by Mr. James Page, meteorologist to the United States, Hydrographic Office, On Ice and Ice Movements in Bering Sea in the Spring Months, as follows:

The pack ice annually moves, roughly speaking, as far south as latitude 58° N. and retreats in the summer to about 71° N., and it is natural to suppose that the movements of this large body of ice would have some influence on the climate of Oregon and Washington. By taking the two early years of 1890 and 1897 it is found that the May temperatures in Portland averaged 4° daily above the normal in the one case, and 2° daily above the normal in the other, and in both the rainfall was decidedly deficient.

The May rainfall has been deficient in years when the ice retreated northward more slowly, but in none of the ten years' record under consideration did the temperature exceed the normal with a slow northward movement, except in 1891, and then the excess was less than half a degree for each day.

The steamer *City of Seattle*, which arrived from Alaska March 31, brings the news that the ice in the Upper Yukon shows signs of breaking up, and that possibly the river will be navigable this spring six weeks earlier than usual.

It may be that the signs of an early spring on the Yukon also imply an early retreat of the pack ice in Bering Sea, and it will be interesting to note how (if this should be the case) the May temperatures in Oregon and Washington will respond for the third time to such conditions.

Vessel and year.	Entered into ice.	Emerged from ice.	Interval in ice.	Average date.	Portland, Oreg., for May.	
					Rain.	Temperature.
1890.	Day.	Day.	Days.	Day.	Inches.	°
Steamship Orca .....	100	137	37	118.5		
Steamship Balaena .....	106	134	28	125.0		
Steamship Narwhal .....	111	132	11	116.5		
Steamship Grampus .....	123	135	12	129.0		
1891.				122.2	1.08	60.6
Steamship Balaena .....	103	155	52	129.0		
Steamship Orca .....	104	150	46	127.0		
Steamship Narwhal .....	112	155	43	138.5		
1892.				131.6	1.83	59.9
Steamship Orca .....	107	157	50	132.0		
Steamship Narwhal .....	108	140	32	124.0		
Steamship Beluga .....	109	143	34	126.0		
Steamship Grampus .....	123	141	18	132.0		
1893.				131.0	0.80	59.0
Steamship Orca .....	106	149	43	127.5		
Steamship Beluga .....	110	154	44	132.0		
Steamship Thrasher .....	118	154	36	136.0		
Bark John Winthrop .....	124	163	39	143.5		
1894.				134.8	2.30	54.4
Steamship Orca .....	103	144	41	123.5		
Steamship Thrasher .....	103	134	31	118.5		
Bark Wanderer .....	105	162	57	133.5		
Bark John Winthrop .....	110	147	37	128.5		
Steamship Beluga .....	112	149	37	130.5		
1895.				126.9	1.09	55.5
Steamship Orca .....	112	153	41	132.0		
Steamship Balaena .....	121	148	27	134.0		
Steamship Narwhal .....	122	146	23	134.0		
Steamship Grampus .....	129	152	23	140.0		
1896.				135.0	3.42	55.9
Steamship Narwhal .....	93	140	47	116.0		
Steamship Orca .....	105	146	41	125.0		
1897.				120.5	3.55	52.2
Steamship Thrasher .....	96	128	32	112.0		
Steamship Jeannette .....	101	133	32	117.0		
Steamship Narwhal .....	108	139	31	124.0		
Steamship Balaena .....	113	140	27	126.0		
1898.				119.8	0.90	61.4
Steamship Jeannette .....	110	136	26	123.0		
1899.				123.0	1.78	56.6
Steamship Bowhead .....	109	140	31	124.0		
Steamship Wm. Bayless .....	100	135	35	118.0		
				121.0	3.16	51.1

On referring to Mr. Page's pamphlet the reader will find a chart of Bering Sea, showing the southern limits of the ice

field, on the average of ten years' of experience and observation, between April 15 and May 15. It appears that the southern edge of the ice will in normal seasons connect the Asiatic Continent at latitude 61°, and the American Continent at latitude 59° along an irregular line whose southern limit is, however, not an altogether safe index to the general character of the preceding winter. The early entrance of a vessel into this ice field by no means assures its early emergence from it. On the route northward the length of time spent in the ice pack and the average date between the entrance and emergence off Indian Point may give us a crude idea as to the importance of the ice and its meteorological significance. The dates are expressed in days, counting from January 1.

If we compare the above figures showing the dates at which it was possible to navigate through the ice, we see a steady retardation of dates from 1890 to 1895, and increase of interval. If we accept these figures as in any way indicating the general character of the ice covering Behring Sea we may make this data the basis for comparing the temperatures at Portland, Oreg., with the condition of the ice. We have, therefore, in the above table added the temperatures and rainfall for May at Portland, thereby reproducing the data that Mr. Beals probably had at hand in writing his paragraph as quoted above. An early passage through the ice implies a rapid movement of the ice northward; therefore early dates in our fifth column should correspond with warm weather, and warm water and southerly winds in Bering Sea south of the ice pack. But the above table does not clearly show that early dates also correspond with warm weather or deficient rainfall in the subsequent month of May at Portland, except for the two years 1890 and 1897.

The whole series may be arranged in order of dates as follows:

Year.	Average date.	Temperature.	Rain.	Year.	Average date.	Temperature.	Rain.
1897.....	119.8	61.4	0.90	1894.....	136.9	55.5	1.09
1896.....	120.5	52.2	3.55	1892.....	131.0	59.0	0.80
1899.....	121.0	51.1	3.16	1891.....	131.5	59.9	1.83
1890.....	122.2	60.6	1.08	1893.....	134.8	54.4	2.30
1898.....	123.0	56.6	1.78	1895.....	135.0	55.5	3.42
Average .....	121.3	56.4	2.09	Average. ....	131.5	57.1	1.89

### THE BROOKLYN MUSEUM OF METEOROLOGY.

The Brooklyn Institute of Arts and Sciences has taken a leading position in the art of public instruction. There are in that city 200,000 children of whom about 90,000 do not go to school, and yet all are provided for in some way or other by the museums and lectures of the Institute at No. 185 Brooklyn avenue.

It is the purpose of the childrens' museum to build up gradually for the children and young people of Brooklyn and Queens County, a museum that will delight and instruct the children who visit it; to bring together collections in every branch of local natural history that is calculated to interest children and to stimulate their powers of observation and reflection; to illustrate by collections of pictures, cartoons, charts, models, maps, and so on, each of the important branches of knowledge which is taught in the elementary schools.

At the present time the collections exhibited in the museum illustrate many branches of industry, such as the iron production and manufacture, and many branches of science such as botany, zoology, geology, physiology and many other branches of knowledge, such as human anatomy, geography,